Airport Property Project Area
(Part of the TIAA CERCLA Site)

Boundaries:

The Airport Property project area is located in the central part of the Tucson International Airport Area (TIAA) site. It contains several source areas to the regional aquifer Tucson Airport Remediation Project (TARP) plume and to a shallow groundwater zone. It is bounded approximately by Los Reales Road to the south and Elvira Road to the north. The Tucson International Airport lies just east of this project area.

Site History:

- Historic industrial and defense related activities resulted in the release of hazardous wastes into the groundwater (mainly during the 1950's, '60s, and '70s) leading to extensive contamination of the regional aquifer. The Airport Property is a source of groundwater contamination to the TARP plume which lies just to the northwest.

- The TIAA site was placed on the National Priorities List (NPL) in 1983.

- In 1996, a remedial investigation (RI), which characterized the extent and concentration of contaminants in the soil and shallow groundwater zone at the Airport Property project area, was completed.

- In 1995, a preliminary feasibility evaluation was completed. In 1997, a feasibility study (FS) report was completed.

- In 1997, EPA issued a record of decision (ROD) for the soils and shallow groundwater zone of the Airport Property.

- In 1999, a consent decree (CD) was negotiated and signed. This CD formalized agreements between EPA and the settling defendants which included General Dynamics Corporation, McDonnell Douglas Corporation, the City of Tucson, and the Tucson Airport Authority. The CD provides for the cleanup of a highly contaminated portion of the Airport Property near the Three Hangars area.

- The CD specifies that the settling defendants will design, build and fund remediation systems in accordance with the ROD and reimburse EPA for past costs. The CD also provides for resolution of other claims between EPA and the settling defendants.

- The CD calls for four separate remedies for the Three Hangars area: 1) a soil vapor extraction (SVE) system to remove trichloroethene (TCE) from the soils; 2) a groundwater pump and treat remediation system to contain (and if possible, remediate) TCE contamination in the shallow groundwater zone; 3) excavation and offsite disposal of polychlorinated biphenyls (PCB) and metals contaminated soils and sediments; and 4) capping and monitoring of an abandoned landfill.

- Part of the shallow groundwater zone is included in an area of technical impracticability, meaning that there is no known technology that can provide complete remediation. However, this area will be hydraulically contained and closely monitored to ensure that contamination does not spread, and new technologies will be evaluated as they become available.

- In August 2002, a shallow groundwater zone (SGZ) remedy and SVE remedy technical memorandum was completed. This document, also known as the 30% Design Report, specifies that a pump and treat system will be installed to capture and remediate SGZ contamination and prevent this contamination from spreading into the regional aquifer. It also calls for SVE treatment of contaminated soils on the Airport Property.

Site Status:

- From March to May 1997, excavation of PCB contaminated soils in the El Vado residential neighborhood and at the Three Hangers area of the Airport Property was completed. The excavated soils in the residential areas were replaced with clean fill dirt and new landscaping.

- The planned pump and treat and SVE systems for the Airport Property are in the construction phase. The settling defendants performed a series of geophysical surveys to guide exploratory drilling in an effort to locate highly transmissive gravel subunits within the shallow groundwater zone west of the Three Hangars area.

- Five extraction wells have been installed in gravel subunits to cut off the shallow groundwater zone from the TARP plume.

- Pumping rates for the five extraction wells that have been installed have been lower than expected. At this time, it is uncertain whether additional wells will be needed to achieve full capture of the shallow groundwater zone.

- In 2002, low levels (approximately three parts per billion (ppb)) of 1,4-dioxane was detected in the upper zone of the regional aquifer, but it is thought to have originated from the AFP-44 site.

Site Hydrogeology:

- The TARP project area is located in the northwestern portion of the TIAA site. In all but the extreme northern portion of the project area (beneath Irvington Road), the regional aquifer is composed of two hydrostratigraphic units: the upper zone of the regional aquifer and the lower zone of the regional aquifer. The regional aquifer in the far northern portion of the project area is composed of only one hydrostratigraphic unit called the undivided regional aquifer.
- The upper zone of the regional aquifer is composed mainly of gravelly sand with some clayey sand and sandy clay, and it extends to a depth of about 200 feet below ground surface (bgs). The lower zone of the regional aquifer is composed mainly of relatively

finer materials including clayey sand with lenses of gravelly sand and sandy clay, and it extends from about 300 feet bgs to an unknown depth.

- Separating the upper and lower zones of the regional aquifer is a thick clayey sequence termed the middle aquitard. This unit generally prevents contamination in the upper zone from reaching the lower zone.

- The undivided regional aquifer (in the northern part of the TARP project area) is composed mainly of course-grained materials.

- Depth to groundwater in the TARP project area varies from 80 to 240 feet bgs and generally gets deeper in a northward direction. The general groundwater flow direction is toward the north-northwest.

- More detailed descriptions of the hydrogeology of the TARP project area can be found in reports and studies available at the TIAA Information Repository.

Contaminants:

The current contaminants of concern in groundwater include volatile organic compounds (VOCs), mainly TCE. TCE concentrations range from five to about 140 ppb. In addition, 1,4-dioxane was recently discovered with concentrations of up to 12 ppb. Contaminants of concern at the site may change as new data become available.

Public Health Impact:

All municipal wells in the area that were contaminated with TCE have been shut down. Most of the domestic wells have either been shut down or converted to irrigation wells. However, a few residents with domestic wells with low levels of TCE and 1,4-dioxane have chosen to continue using their wells.

Community Involvement Activities:

The unified community advisory board (UCAB) conducts public meetings to discuss the site the third Wednesday of every other month (starting in January).

Information Repository:

Interested parties can review site information at the information repository at the TCE Superfund Information Library located at 101 W. Irvington Road, within the El Pueblo Branch Library in Tucson, (520) 791-4733. Site information is also available at both ADEQ's Southern Regional Office located at 400 W. Congress, Suite 433 in Tucson, and the main office located at 1110 West Washington Street, Phoenix. Files are available for review Monday through Friday from 8 a.m. to 5 p.m. Please call (520) 770-3361 to arrange a file review appointment at the Southern Regional Office or the ADEQ Records Center (602) 771-4378 or (800) 234-5677 (Arizona toll-free).

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*In Arizona, but outside the Tucson area, call toll-free at (888) 271-9302.
**Call EPA's toll-free message line at (800) 231-3075.